## A history of the International Federation of Classification Societies<sup>1</sup>

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The author of the present article has experienced the foundation of the International Federation of Classification Societies (IFCS) as a member and officer of the German Classification Society (Gesellschaft für Klassifikation, GfKl). The GfKl has been founded in Frankfurt (Main) on February 12, 1977 by scientists and practitioners stemming from various fields of knowledge. This event, even if realized on a national basis, has to be seen in the context of a quite general and worldwide development: In fact, during the sixties of the 20th century there was a great interest and intensive research in problems of classification, data analysis, and systems for ordering knowledge. Not only in statistics, but also in many other domains of science and practice, e.g.,

- in *library science* with topics such as subject indexing and cataloguing, indexing languages, and broad systems of ordering;
- in *documentation* with the development of data bases, thesauri construction, and information retrieval systems;
- in *linguistics and terminology* with language analysis, concept formation, automatic translation, dialectometry;
- in *biology* with problems in taxonomy, systematics, phylogeny, and bacteria classification;
- in *technology* with pattern recognition systems, network optimization, and cybernetics;
- in *industry* with product and patent classification, systematics of commodities, and the segmentation of transport networks; and finally
- in *economy and marketing* when searching for market segments and consumer groups, product positioning strategies, and corresponding data evaluation techniques.

In this framework it was not at all surprising that numerous organizations and scientific societies emerged with the idea to investigate and resolve the numerous domain-specific problems of classification and ordering, on a theoretical as well as on a practical level. Typical examples include:

- the Fédération Internationale de Documentation (FID) with its
- Committee on Classification Research (FID/CR) (chaired by the German Ingetraut Dahlberg) and its Committee for Universal Classification (FID/C3),
- the International Federation of Library Associations and Institutions (IFLA),
- the Gesellschaft für Dokumentation (DGD, Society for Documentation) with its Komitee zur Klassifikations- und Thesaurusforschung (Committee for Classification and Thesaurus Research),

<sup>&</sup>lt;sup>1</sup>This is a slightly modified, translated and updated version of Chapter 9 of the book H.-H. Bock, P. Ihm (eds.): 25 Jahre Gesellschaft für Klassifikation: Klassifikation und Datenanalyse im Wandel der Zeit. Shaker Verlag, Aachen 2001, 184 pp., ISBN 3-8265-9778-8

• the Internationale Gesellschaft für Warenkunde und Technologie (IGWT, International Society for Product Research and Technology)

and - in addition to GfKl and as a most important issue for the future IFCS - some societies with interests more on the quantitative and numerical classification side:

- A British Classification Society (CS) was founded in UK on 17th of April 1964 during a conference of ASLIB (a society for British librarians); in 1968 its North American members founded
- the American Branch of the CS (renamed Classification Society of North America, CSNA, later on), whereas the British group was called the European Branch of the CS at that time and renamed the British Classification Society (BCS) since 1st of June 1984.
- The Société Française de Classification (SFC) was founded on February 24, 1978 and renamed Société Francophone de Classification from November 30, 1982, and finally
- the Japanese Classification Society (JCS) that was founded on July 11, 1983.

Before and after the emergence of these five "classical" classification societies in USA, UK, France, Germany, and Japan there were many contacts among the involved individual members and insofar also some need, but also the vivid desire to cooperate and to establish an "International Classification Society".

This idea was intensively discussed in June 1982 during the Annual Meeting of the American group in Montréal where also the president of GfKl, I. Dahlberg, was participating. Obviously, at that time, there was still too much disagreement among the different and contrasting views (e.g., on the organizational form, the multilingual problem, and on a journal to be created) as to realize the foundation activity immediately. But this meeting was the starting point for an intensive discussion about the creation of a worldwide society that was continued inside and among the prospective partner societies.

The topic was debated more specifically at various meetings worldwide. For example, in June 1982, the German Classification Society (GfKl) invited various officers of other classification societies to its annual conference in Augsburg in order to discuss the issue again. There were representatives from the Société Française de Classification (SFC; M. Jambu, P. Richy), the Classification Society - European Branch (CS/EB; F. Bisby), the Classification Society - North American Branch (CS/NAB; R.R. Sokal and J.D. Carroll) and GfKl (I. Dahlberg, H.-H. Bock, P. Ihm). R.R. Sokal summarized the results of these talks in a written report that was circulated among the participants. Another meeting took place in Toulouse in September 1982 under the auspices of SFC (with P. Ihm, E. Diday, I. Lerman, J.C. Gower, D. Wishart, et al.). Afterwards, Carroll and Sokal sent out the revised version of a proposed constitution to various classification societies.



## ORGANISÉ PAR / ORGANIZED BY VERANSTALTUNG

#### CESA

#### Centre d'Enseignement Supérieur des Affaires



AVEC LE CONCOURS DU WITH THE PARTICIPATION OF IM BUNDE MIT

#### **CNET**

Centre National d'Études des Télécommunications

### CONGRÈS EUROPÉEN CONJOINT DE PSYCHOMÉTRIE ET DES SOCIÉTÉS DE CLASSIFICATION

JOINT EUROPEAN MEETING OF PSYCHOMETRIC AND CLASSIFICATION SOCIETIES

## EUROPAÏSCHE KONGREß DER PSYCHOMETRIK UND KLASSIFIKATIONVEREINE

6 - 9 juillet 1983 july 6 - 9 1983 6 - 9 juli 1983 JOUY-EN-JOSAS (near Paris) (in der Nähe von Paris)

#### - PATRONAGE/ SPONSORSHIP/ LEITUNG -

Centre National de la Recherche Scientifique (C.N.R.S.) Société Francophone de Classification (S.F.C.) The Classification Society The Psychometric Society Association des Statisticiens Universitaires (A.S.U.) Gesellschaft für Klassifikation

#### - SUJETS / TOPICS / THEMEN -

#### PSYCHOMÉTRIE / PSYCHOMETRICS / PSYCHOMETRIK

Théorie de la mesure Measurement theory Modèles mathématiques Analyse des données Data analysis Daten Analyse Méthodes statistiques Statistical methods Measurement theory Messung Theorie Mathematische Modelle Daten Analyse Statistische Methoden

#### CLASSIFICATION / CLASSIFICATION / KLASSIFIKATION

Classification, optimisation
Analyse des données
Data analysis
Daten Analyse
Taxinomie numérique
Taxonomy
Systematik
Computer Programmen
P.
Tout type d'application
Clustering, optimization
Daten Analyse
M
Systematik
Computer Programmen
P.
Applikationen

#### COMITÉ D'ORGANISATION ORGANIZING COMMITTEE ORGANISATION KOMITEE

 Mathematische Modellen
 M. TENENHAUS - C.E.S.A. (France)

 Daten Analyse
 J.-M. BOUROCHE - C.O.R.E.F. (France)

 Statistische Methoden
 G. SAPORTA - Univ. PARIS V (France)

#### COMITÉ D'ORGANISATION ORGANIZING COMMITTEE ORGANISATION KOMITEE

M. JAMBU - C.N.E.T. (France)
C. PERRUCHET - C.N.E.T. (France)
P. RICHY - C.N.E.T. (France)

#### RENSEIGNEMENTS / INFORMATIONS / AUSKUNFT

Psychométrie: M. TENENHAUS - C.E.S.A. (HEC-ISA-CFC)

1, rue de la Libération - 78350 JOUY-EN-JOSAS FRANCE

Classification: M. JAMBU - C.N.E.T. (PAA-ATR-MTI)

38-40, rue du Général Leclerc 92131 ISSY-LES-MOULINEAUX FRANCE

CNET-IMP-82/3666

The poster of the 1983 Classification Conference in Jouy-en-Josas, France

In those times, the British-American Classification Society was used to organize, every second year, a joint international conference with the Psychometric Society, at a place in Europe and in America in turn. This schedule provided the opportunity to discuss the open questions again during the joint conference in Jouy-en-Josas (France) from July 6-9, 1983. In fact, this conference was announced by a poster in three languages with the heading

Congrès Européen conjoint de Psychométrie et des Sociétés de Classification Joint European Meeting of Psychometric and Classification Societies Europäischer Kongreß der Psychometrik und Klassifikationsvereine

In the framework of this conference, a committee comprizing of Ph. Arabie, H.-H. Bock, J.D. Carroll, E. Diday, G.W. Furnas, J.C. Gower, L.J. Hubert, M. Jambu, and P. Richy met on July 7, 1983 and decided, after some discussion, to continue the elaboration of a constitution under the chair of H.-H. Bock, with the idea to found the international society in 1985 during the next joint classification conference in Cambridge (UK) in the form of an International Federation of single national classification societies.

On July 28, 1983 Carroll and Sokal sent a new proposal of the constitution to 26 leading members of GfKl, JCS, SFC, and SIS (Società Italiana di Statistica). In an intensive correspondence comprizing several ballots and iterative rounds, Bock (in cooperation with Carroll, Sokal and Ch. Hayashi) reshaped and harmonized the distinct opinions and modification proposals by the partners and compiled them into a document that was finally accepted by all parties. Now all was ready for the foundation of the planned joint federation.

The foundation ceremony took place during the 4th European Meeting of the Psychometric Society and Classification Societies at Queen's College in Cambridge (UK) where the

#### International Federation of Classification Societies (IFCS)

was founded on July 4, 1985. The contract was signed by the following societies and representatives (those marked with a \* were present in Cambridge, the other signatures were handed in later on):

- British Classification Society (BCS): J.C. Gower\*, A.J. Boyce
- Classification Society of North America (CSNA): J.D. Carroll\*, R.R. Sokal
- Gesellschaft für Klassifikation (GfKl): H.-H. Bock\*, P. Ihm
- Japanese Classification Society (JCS): Ch. Hayashi\*, K. Yajima\*
- Società Italiana di Statistica (SIS): N.C. Lauro\*, A. Mineo
- Société Francophone de Classification (SFC): M. Jambu\*, Ch. Perruchet\*.

H.-H. Bock was assigned the *Acting IFCS President*, the first full IFCS Executive Committee was elected by the partners in a separate voting process in fall 1985. A first international IFCS conference was scheduled for the year 1987.

/						
	We, the approved delegates of the following Societies or Groups:					
	British Classification Society (BCS)  Classification Society of North America (CSNA)  Gesellschaft für Klassifikation e.V. (GfKI)  Japanese Classification Society (JCS)  Société Francophone de Classification (SFC)  Italian Statistical Society (SIS)					
	declare the formation of the					
	INTERNATIONAL FEDERATION OF CLASSIFICATION SOCIETIES					
	the founding members of which are as listed above. The provisional consti-					
	tution is given as an annexe; a final constitution will be adopted by					
	unanimous agreement of the founding Council.					
	Queens' College, Cambridge, U.K. July 4th, 1985					
-	J.C. Gower J-C. Gon A.J. Boyce Anthony Boya-(BCS)					
	J.D. Carroll J.D. Canolle. R. R. Sokal Landerson					
0	H-H. Bock W. W. Bork P. Ihm Peter Olcur (GFKI)					
	C. Hayashi Citagac K. Yajima Kizi Jegin (JCS)					
	M. Jambu C. Perruchet (SFC)					
	N. Lauro Allouro A. Mineo Alliuco (SIS)					

 $The \ founding \ document \ of \ IFCS$ 

Even if the IFCS constitution adopted in Cambridge was not yet complete (the final version was obtained after some further modification cycles only in August 1986), the IFCS began its scientific work without any delay: Within a short time, Bock submitted to the Founding Council an activity plan, initiated the nomination of the Council representatives of all Member Societies, organized the election of the first IFCS Executive Committee (where he was formally elected as IFCS president), and prepared the organization of the first IFCS Conference - in Germany, at RWTH Aachen University, with the GfKl as the inviting IFCS Member.

This conference took place from June 29 to July 1, 1987 under the theme Classification, Data Analysis, and Related Methods and was generously supported by the Deutsche Forschungsgemeinschaft (DFG, the German Research Foundation). Without any doubt, this conference, with more than 300 participants from over the world, with 28 invited and funded international speakers (10 from behind the Iron Curtain!) and about 140 contributed papers, was a great success and established the public recognition of IFCS as a scientific organization (and insofar also the GfKl, the hosting society)<sup>2</sup>. As a summary of the IFCS conference, a Proceedings volume was edited in 1988 that documented the scientific orientation and the potential of the IFCS on a worldwide scale.

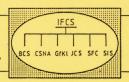
In the following years, the activities of IFCS were primarily concentrated on the organization of the biennial international IFCS conferences with topics originating from statistics, quantitative data analysis, computational algorithms, and tools from informatics, carefully balancing between theoretical investigations and practical applications. The following table lists the places of these conference and their local organizers.

Year	Place	Hosting Society	Organizer
1987 1989 1991 1993 1996 1998 2000 2002 2004 2006	Aachen/Germany Charlottesville/USA Edinburgh/Scotland Paris/France Kobe/Japan Rom/Italy Namur/Belgium Krakau/Poland Chicago/USA Ljubljana/Slovenia	GfKl CSNA BCS SFC JCS SIS SFC, VOC SKAD CSNA	HH. Bock H. Bozdogan D. Wishart, A. Gordon E. Diday Ch. Hayashi A. Rizzi, M. Vichi JP. Rasson, H. Kiers A. Sokolowski F.R. McMorris A. Ferligoj, V. Batagelj

 $The\ biennial\ IFCS\ conferences$ 

<sup>&</sup>lt;sup>2</sup>Simultaneously, RWTH Aachen hosted the regular annual conference of the GfKl with about 50 participants that were, in that year, mainly confined to topics from linguistics and library science.

British Classification Society Classification Society of North America Gesellschaft für Klassifikation Sektion 'Datenanalyse und Num. Klassif.'



分類の理論と応用に触する研究会 (Japan Classification Society) Société Francophone de Classification Società Italiana di Statistica

# FIRST CONFERENCE of the INTERNATIONAL FEDERATION OF CLASSIFICATION SOCIETIES

# CLASSIFICATION AND RELATED METHODS OF DATA ANALYSIS

Technical University Aachen, Aachen, Federal Republic of Germany June 29 to July 1, 1987

#### FIRST ANNOUNCEMENT & CALL FOR PAPERS

The Conference is devoted to the presentation of theoretical and applied papers on classification and related methods of data analysis in the broad sense. This includes mathematical and statistical as well as practical investigations, survey papers on the state of the art, real case studies, papers on numerical and algorithmic aspects, applications in special fields of knowledge, and the interface between classification and Information Sciences.

Papers are invited for this meeting. Suitable main topics include the following ones:

- Discrimination, classification, aggregation, and clustering methods
- 2. Pattern recognition methods
- 3. Linear, nonlinear, and algebraic methods of data analysis
- 4. Similarity and distance measures, measurement theory, quality of data
- 5. Multidimensional scaling and seriation
- Probabilistic models for data analysis and classification
- Graphical representation of structures and classifications
- Biological taxonomy, systematics, microbiological classification (molecules, strings etc.)
- 9. Comparison of classifications, consensus methods
- 10. Analysis of tree- and graph-like patterns
- 11. Classification for information retrieval systems
- Expert systems, data bases, and classification methods
- 13. Algorithmic aspects and software for computers and micro-computers
- 14. Applications in specific fields: Archeology, biology and medicine, chemistry, computer science, documentation and information sciences, economics and marketing, engineering and technology, psychology and social sciences etc.

If you plan to attend the conference please write to the conference chairman:

Prof. Dr. H.H. Bock, IFCS 87, Institut für Statistik und Wirtschaftsmathematik, Technical University Aachen, Wuellnerstraße 3, D-5100 Aachen, FRG

who will provide all further information concerning the program and your registration.

If you intend to present a paper, please send an English abstract of at most one page, classified into one of the 14 subjects given above. A selection of papers will be published in a Proceedings volume. Deadline for submitting papers is <u>January 15</u>, 1987.

Scientific Program Committee:

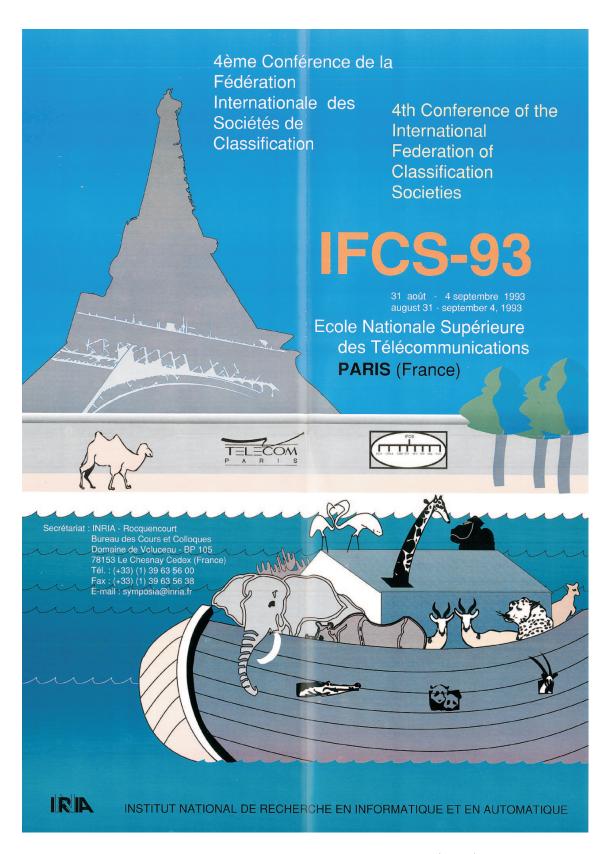
International Members

Diday E., Le Chesnay, France Gower J., Harpenden, UK Hayashi Ch., Tokyo, Japan Lauro N.C., Napoli, Italy Sokal R.R., Stony Brook, USA German Members and Organisation Committee

Bock H.H., Aachen Dress A., Bielefeld Feger H., Hamburg Gaul W., Karlsruhe Hartung J., Dortmund

Ihm P., Marburg Niemann H., Erlangen-Nürnberg Schader M., Hamburg Schneider H.-J., Berlin Wille R., Darmstadt

The poster announcing the first IFCS conference in Aachen (1987)



Poster of the 4th IFCS conference in Paris (1993)



Poster of the 5th IFCS conference in Kobe (1996)

In the scientific world the IFCS conferences were soon considered as an attractive information exchange market and became a most important meeting point for people interested in classification and data analysis. One reason was certainly the fact that - with the exception of the second and third IFCS conference - a selection of the presented papers was regularly published in (post- or pre-conference) proceedings, typically by Springer-Verlag (see the following table).

	Editors	Title and Publisher
IFCS-87	HH. Bock	Classification and related methods of data analysis  North Holland, Amsterdam, 1988
IFCS-93	<ul><li>E. Diday, Y. Lechevallier,</li><li>M. Schader, P. Bertrand,</li><li>B. Burtschy</li></ul>	New approaches in classification and data analysis Springer, Heidelberg, 1994
IFCS-96	Ch. Hayashi, N. Ohsumi, K. Yajima, Y. Tanaka, HH. Bock, Y. Baba	Data science, classification, and related methods  Springer, Tokyo, 1998
IFCS-98	A. Rizzi, M. Vichi, HH. Bock	Advances in data science and classification Springer, Heidelberg, 1998
IFCS-00	H.A.L. Kiers, JP. Rasson, P.J.F. Groenen, M. Schader	Data analysis, classification, and related methods  Springer, Heidelberg, 2000
IFCS-02	K. Jajuga, A. Sokolowski, HH. Bock	Classification, clustering, and data analysis Springer, Heidelberg, 2002
IFCS-04	D. Banks, L. House, F.R.McMorris, P. Arabie, W. Gaul	Classification clustering, and data mining applications Springer, Heidelberg, 2004
IFCS-06	V. Batagelj, HH. Bock, A. Ferligoj	Classification and data analysis Springer, Heidelberg, 2006

The Proceedings of IFCS conferences

The fast evolution of the broad domain of classification and data analysis and the positive development of the Federation are underlined by the fact that more and more national societies joined the IFCS in the sequel such that the number of IFCS Member Societies increased from six in 1985 to twelve in 2005, with a total of about 1800 individual members involved. Apart from the above mentioned founding Members (BCS, CSNA, GfKl, JCS, SFC, SIS) the list of 'new' Member Societies reads as follows:

- the Vereniging voor Ordinatie en Classificatie (VOC, founded on January 13, 1989, joined on June 28, 1989)
- the Associação Portugesa de Classificação e Análise de Dados (CLAD) founded in June 1994, joined in March 1995
- the Section on Classification and Data Analysis of the Polish Statistical Society (SKAD), founded in 1989
- the Korean Classification Society (KCS), founded in 1993, joined on March 28, 1996,

- the Irish Pattern Recognition and Classification Society (IPRCS), founded in 2000
- the Central American and Caribbean Society of Classification and Data Analysis (SoCCCAD), founded in 2000, joined on July 12, 2000.

In addition, there is a *Group-at-Large* that comprizes classificationists and data analysts who do not reside in the geographical neighbourhood of a large, national classification society or group. For some time, IFCS comprized also the former 'Yugoslavian Classification Group', but its membership was officially discontinued in 1998 as a consequence of the turmoil in the Balkan countries.

Nowadays, after a remodeling of the IFCS constitution in 2004, the internal organization of IFCS provides an *Executive Committee* comprizing six persons: President-Elect, President, Past-President, Secretary, Treasurer, and a Publication Officer. The period of office is six years for each president (i.e., two years as president-elect, then two as president, and then another two as past-president). The terms of office are three years for the Secretary, the Treasurer and the Publication Officer. The general policies of the IFCS are determined by the *IFCS Council* that comprizes one member from each IFCS Member Society (two members for the large societies), the Executive Committee, and four 'additional' members that are elected by the Council for a term of four years. The names of the executive officers are listed in the table below, photos of the former IFCS presidents are displayed at the end of this article.

A most commendable activity of the IFCS consists in the support it provides for young researchers. In fact, in the early nineties, the IFCS president W.H.E. Day (CSNA) initiated a prize for fostering young scientists in the field of classification and data analysis: the IFCS Young Scientist Award. After intensive refereeing processes, it was awarded to Christoph Klauer (Heidelberg, GfKl) in 1993 and to François-Joseph Lapointe (Montréal, CSNA) in 1996. In 1997, the IFCS president Ch. Hayashi reshaped the price and the awarding procedure and thereby established the IFCS Travel Award Program: This program supports, after a flexible and open nomination and evaluation process, the participation of young scientists in an IFCS conference. For example, seven price winners were invited to the IFCS conference in Rome in 1998. The particular merits of Ch. Hayashi reside in the fact that he also provided personally the funds for financing the prize for several years. In order to honor his commitment, the prize was renamed Chikio Hayashi Award in 2004.

Year	President	Vice-Presidents	Secretary	Treasurer	Public. Officer
1985	HH. Bock	_	_		
1986	HH. Bock	_		_	
1987	idem	Sokal		_	_
1988	R.R. Sokal	Bock	Legendre	Legendre	
1989	idem	Gower	idem	idem	
1990	J.C. Gower	Sokal	idem	idem	Murtagh
1991	idem	Day	idem	idem	idem
1992	W.H.E. Day	Gower	idem	idem	idem
1993	idem	Gordon	Meulman	Meulman	idem
1994	A. Gordon	Day	idem	idem	Yajima
1995	idem	Carroll	idem	idem	idem
1996	J.D. Carroll	Gordon	idem	idem	idem
1997	idem	Ch. Hayashi	Banks	A. Hayashi	idem
1998	Ch. Hayashi	Carroll	idem	idem	DeBoeck
1999	idem	Rasson	idem	idem	idem
2000	JP. Rasson	Ch. Hayashi	idem	idem	idem
2001	idem	Lauro	Banks	T.R. Lee	idem
2002	N.C. Lauro	Rasson	idem	idem	Jajuga
2003	idem	Kiers	idem	idem	idem
2004	H.A.L. Kiers	Lauro	idem	idem	idem
2005	idem	$\begin{cases} \text{Past: Lauro} \\ \text{Elect: Hand} \end{cases}$	Vinzi	Van Mechelen	idem
2006	D.J. Hand	$\begin{cases} \text{Past: Kiers} \\ \text{Elect: NN1} \end{cases}$	idem	idem	NN2
2007	idem	$\begin{cases} \text{Past: Kiers} \\ \text{Elect: NN1} \end{cases}$	idem	idem	idem
2008	NN1	$\begin{cases} \text{Past: Hand} \\ \text{Elect: NN3} \end{cases}$	NN4	NN5	idem
2009	idem	$ \begin{cases}                                   $	idem	idem	NN6

The members of the IFCS Executive Committee 1985--2009

# Photo gallery of IFCS Presidents



Hans-Hermann Bock (1985 – 1987)



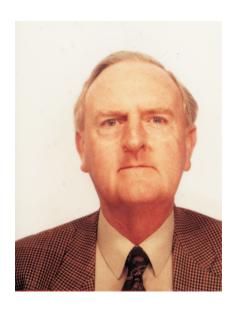
Robert R. Sokal (1988 – 1989)



John C. Gower (1990 – 1991)



Bill (W.H.E.) Day (1992 – 1993)



Allan Gordon (1994 – 1995)



Douglas J. Carroll (1996 – 1997)



Chikio Hayashi (1998 – 1999)



Jean-Paul Rasson (2000 – 2001)



Carlo Lauro (2002 – 2003)



Henk A.L. Kiers (2004 – 2005)



David Hand (2006 – 2007)